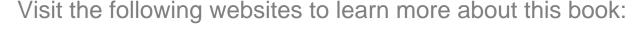
# Residential Design Using Autodesk Revit 2023

Includes video instruction



















# TABLE OF CONTENTS

		Page	
1.	Getting Started with Autodesk® Revit® 2023		
	1-1 What is Revit 2023?	1-1	
	1-2 Overview of the Revit User Interface	1-11	
	1-3 Open, Save and Close a Revit Project	1-26	
	1-4 Creating a New Project	1-31	
	1-5 Using Zoom and Pan to View Your Drawings	1-33	
	1-6 Using Revit's Help System	1-38	
	1-7 Introduction to Autodesk 360	1-41	
	Self-Exam and Review Questions		
2.	2. Lake Cabin: FLOOR PLAN (The Basics)		
	2-1 Walls	2-1	
	2-2 Doors	2-5	
	2-3 Windows	2-7	
	2-4 Roof	2-9	
	2-5 Annotation and Dimensions	2-11	
	2-6 Printing	2-15	
	Self-Exam and Review Questions		
3.	Overview of Linework and Modify Tools		
	3-1 Lines and Shapes	3-1	
	3-2 Snaps	3-15	
	3-3 Edit Tools	3-20	
	3-4 Annotations	3-33	
	Self-Exam and Review Questions		
4.	Drawing 2D Architectural Objects		
	4-1 Sketching Rectilinear Objects	4-1	
	4-2 Sketching Objects with Curves	4-11	
	Self-Exam and Review Questions		
5.	FLOOR PLAN (First Floor)		
	5-1 Project Setup	5-1	
	5-2 Exterior Walls	5-8	
	5-3 Interior Walls	5-24	
	5-4 Doors, Openings and Windows	5-36	
	5-5 Adding a Fireplace	5-52	
	Self-Exam and Review Questions		
6.	FLOOR PLANS (Second Floor and Basement Plans)		
	6-1 View Setup and Enclosing the Shell	6-1	
	6-2 Adding the Interior Walls	6-6	
	6-3 Adding Doors, Openings and Windows	6-10	
	6-4 Basement Floor Plan	6-15	
	6-5 Stairs	6-22	
	Self-Exam and Review Questions		
7.	ANNOTATION		
	7-1 Text	7-2	
	7-2 Dimensions	7-16	
	7-3 Tagging	7-31	
	7-4 Shared Parameters	7-39	
	7-5 Keynoting	7-46	
	7-6 Adding Dimensions	7-55	
	Self-Exam and Review Questions		

8.	ROOF		
	8-1	Roof Design Options (Style, Pitch and Overhang)	8-1
	8-2	Gable Roof	8-16
	8-3	Low Roof Elements	8-24
	8-4	Skylights	8-35
		Self-Exam and Review Questions	
9.	FLOOR	SYSTEMS AND REFLECTED CEILING PLANS	
	9-1	Floor Systems	9-1
	9-2	Ceiling Systems (Susp. ACT and Gypsum Board)	9-16
	9-3	Placing Light Fixtures	9-31
	9-4	Annotations  Self-Event and Proving Questions	9-36
40	DI DI(4/2	Self-Exam and Review Questions	
10.	ELEVAT		10.1
	10-1	Creating and Viewing Exterior Elevations	10-1
	10-2 10-3	Modifying the Project Model: Exterior Elevations Creating and Viewing Interior Elevations	10-9 10-16
	10-3	Modifying the Project Model: Interior Elevations	10-10
	10-5	Design Options	10-25
	100	Self-Exam and Review Questions	10 20
11.	SECTIO	NS	
	11-1	Specify Section Cutting Plane in Plan View	11-1
	11-2	Modifying the Project Model in Section View	11-7
	11-3	Wall Sections	11-15
	11-4	Annotation and Detail Components	11-25
		Self-Exam and Review Questions	
12.		OR DESIGN	
	12-1	Bathroom Layouts	12-1
	12-2	Kitchen Layout	12-7
	12-3 12-4	Furniture	12-20 12-25
	12-4	Adding Guardrails Self-Exam and Review Questions	12-23
13	SCHEDI		
15.	13-1	Room and Door Tags	13-1
	13-1	Generate a Door Schedule	13-7
	13-3	Generate a Room Finish Schedule	13-11
		Self-Exam and Review Questions	
14.	SITE TO	OOLS & PHOTO-REALISTIC RENDERING	
	14-1	Site Tools	14-1
	14-2	Creating an Exterior Rendering	14-15
	14-3	Rendering an Isometric in Section	14-28
	14-4	Creating an Interior Rendering	14-35
	14-5	Adding People to the Rendering	14-42
		Self-Exam and Review Questions	
15.	CONSTI	RUCTION DOCUMENTS SET	
	15-1	Setting Up a Sheet	15-1
	15-2	Sheet Index	15-10
	15-3	Printing a Set of Drawings	15-17
		Self-Exam and Review Questions	
16.	INTROI	DUCTION TO PHASING AND WORKSHARING	
	16-1	Introduction to Phasing	16-1
	16-2	Introduction to Worksharing	16-10
	16-3	Phasing Exercise	16-23
	16-4	Worksharing Exercise	16-35
		Self-Exam and Review Questions	

### 17. INTRODUCTION TO REVIT CONTENT CREATION

17-1	Basic Family Concepts	17-3
17-2	The Box: Creating the Geometry	17-13
17-3	The Box: Adding Parameters	17-29
17-4	The Box: Formulas and Materials	17-4
17-5	The Box: Family Types and Categories	17-59
	Self-Exam d' Review Questions	

### Appendix A: Autodesk User Certification Exam Introduction

Index

## **Exclusive Online Content: Bonus Chapters**

Instructions for download on inside front cover of book

### 18. INTRODUCTION TO COMPUTERS - 46 pages

- 18-1 Computer Basics: Terms and Functions
- 18-2 Overview of the Windows User Interface
- 18-3 File Management Introduction Self-Exam & Review Questions

### Appendix B - ENGINEERING GRAPHICS - 38 pages

Appendix C - ROOF STUDY WORKBOOK - DRAFT EDITION - 90 pages

Appendix D - FINDING MISSING ELEMENTS IN REVIT - 24 pages

Appendix E - INTRODUCTION TO HAND SKETCHING - 42 pages

**Appendix F – BUILDING PERFORMANCE ANALYSIS IN REVIT AND INSIGHT 360 –** 44 pages

### **Bonus Videos**

This book comes with several short videos, approximately 3-5 minutes long, which can be watched in order while working through this book. The full index of video titles can be found on the next page.

These videos are supplementary and not required to complete the exercises in this book. Rather, the videos are intended to cover many of the fundamental Revit topics in a different context to help the reader better understand this important material. A few videos cover intermediate topics, such as the sloped "cloud" celling shown in the image to the right.



### **Bonus Videos Index:**

6-4

Sloped Floor

Ceilings 7 User Interface 7-1 Introduction 1-1 Introduction 7-2 Ceiling Placement Settings 1-2 File Tab 1-3 Ribbon and QAT 8 Elevations 1-4 Properties and Type Selector 8-1 Introduction 1-5 Drawing Area 8-2 **Exterior Elevations** 1-6 Status Bar 8-3 Interior Elevations 2 Walls 9 Sections 2-1 Introduction 9-1 Introduction Wall Types 2-2 2-3 Wall Placement Settings 10 **Schedules** 2-4 Wall Height 10-1 Introduction 2-5 Creating New Wall Types 2-6 Sloped Walls 11 Rendering 11-1 Introduction 3 Doors and Windows 3-1 Introduction 12 **Design Options** 3-2 Placing Doors 12-1 Introduction 3-3 Placing Windows 3-4 Managing Loaded Content 13 Sheets and Sheet Lists 3-5 Repositioning Doors and 13-1 Introduction Windows 14 Worksharing Introduction **Stairs** 14-1 Introduction 4-1 Introduction 14-2 Worksharing Project Setup 4-2 Railings 14-3 Creating a Local File 14-4 Troubleshooting 5 Roofs 5-1 Introduction 15 **Phasing** 5-2 Hip Roof 15-1 Introduction 5-3 Gable Roof 15-2 Phase Project Setup Shed Roof Phasing View Settings 5-5 Flat Roof 15-4 Phasing Element Settings 5-6 Roof Fascia 5-7 Roof Gutters Sweeps and Reveals 16 5-8 Roof Openings 16-1 Introduction 16-2 Sweeps 6 **Floors** 16-3 Reveals 6-1 Introduction 16-4 New Profiles 6-2 Floor Placement Settings 6-3 Floor Openings